

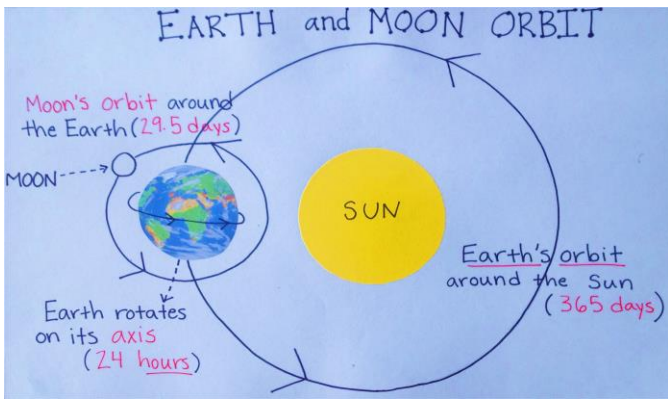
Science Focus: <b>Earth &amp; Space</b>	Year Group: <b>5</b>	Autumn Term <b>2</b>
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**Key Knowledge:**

**Mercury, Venus, Earth** and **Mars** are rocky planets. They are mostly made up of metal and rock. **Jupiter, Saturn, Uranus** and **Neptune** are mostly made up of gases (helium and hydrogen) although they do have cores (centres) made up of rock and metal.

**Pluto** was considered a planet but, in 2006, it was reclassified as a dwarf planet.

The Moon orbits the Earth in an oval-shaped path, while spinning on its axis.



The Earth rotates on its axis. It does a full rotations once every 24 hours (a day). The Earth is also rotates around the Sun, taking just over 365 days to complete a full orbit.

When one side of the Earth is facing the Sun, it is daytime. When one side of the Earth faces away from the Sun, it is night.

**Key Vocabulary:**

**Sun:** A large star that earth and other planets orbit around.

**Star:** A giant ball of gas held together by its own gravity.

**Moon:** A natural satellite which orbits earth and other planets.

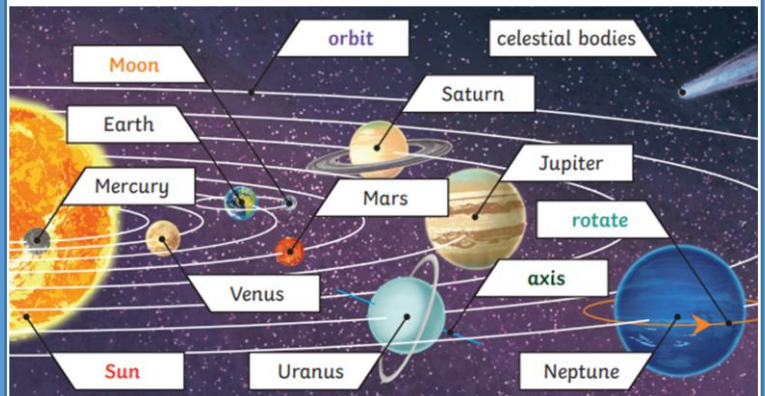
**Planet:** A large object (usually spherical) that orbits a star.

**Sphere:** A round 3D shape in the shape of a ball.

**Spherical bodies:** Astronomical objects shaped like spheres.

**Satellite:** Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.

**Diagrams and Symbols:**



**Possible Experiments:**

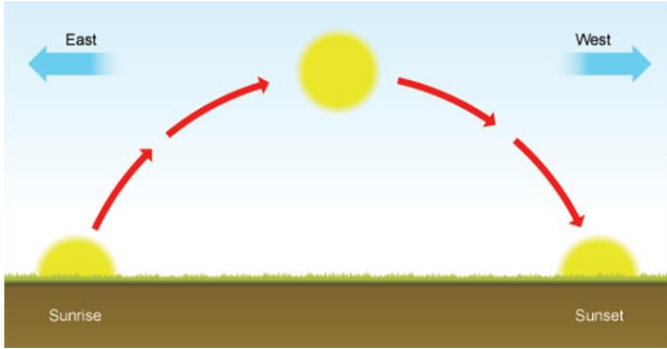


**Making a model Solar System**

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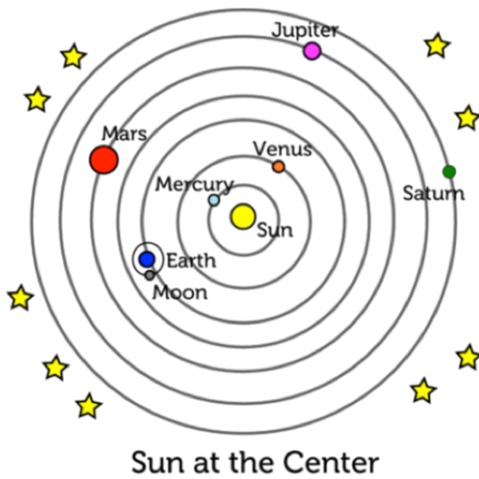
**Key Knowledge:**

The Sun appears to move across the sky, however, the Sun doesn't move. The Earth's movements create the different positions of the Sun in the sky.



**Heliocentric Model:**

Scientists and astronomers (such as Copernicus and Kepler) discovered that the planets actually orbited the Sun. Galileo's work on gravity allowed scientists to understand how planets stayed in orbit.



**Possible Experiments:**

Scientist and astronomer fact files.

Models of individual planets:



**Key Vocabulary:**

**Orbit:** To move in a regular, repeating curved path around another object.

**Rotate:** To spin. E.g. The earth rotates on its own axis.

**Axis:** An imaginary line that a body rotates around. E.g. The Earth's axis runs from the North Pole to the South Pole.

**Geocentric model:** A belief people used to have that other planets and the Sun orbited around the earth.

**Heliocentric model:** The structure of the Solar System where the planets orbit around the Sun.

**Astronomer:** Someone who studies or is an expert in astronomy (space science).

**Diagrams and Symbols:**

**Geocentric Model:**

Many years ago, people believed that planets moved around the Earth. This was later found to be incorrect.

